In the Matter of	)	
	)	
Facilitating the Deployment of Text-to-911 and	)	PS Docket No. 11-153
Other Next Generation 911 Applications	)	
	)	
Framework for Next Generation 911 Deployment	)	PS Docket No. 10-255

REPLY COMMENTS OF APCO INTERNATIONAL

The Association of Public-Safety Communications Officials-International, Inc.

("APCO") hereby submits the following Reply to comments filed in response to the

Commission's *Notice of Proposed Rulemaking*, FCC 11-134 (released September 22, 2011)

("*NPRM*"), in the above-captioned proceedings regarding Next Generation 9-1-1 ("NG9-1-1").

APCO submitted initial comments that supported efforts to identify means of expediting

text-to-9-1-1 capability, but urged caution insofar as there are significant, inherent limitations

with the use of SMS for that purpose and that other transmission methods would be far more

effective in the long term. APCO urged that SMS text-to-9-1-1 should only be promoted for use

by those with an inability to use voice communications, whether due to disability, the nature of

the emergency, or network congestion. APCO also supported the development of rules and

policies to provide priority access for 9-1-1 calls. The following addresses comments filed by

other parties on these and other aspects of the *NPRM*.

State/Regional/PSAP Triggers

One of the key issues addressed in the *NPRM* and many of the comments concern

requirements that states, regions, or perhaps individual PSAPs be ready to receive and process

NG9-1-1 information before telecommunications service providers are subject to NG9-1-1 mandates. APCO's initial comments agreed with the general principle of a readiness requirement, but many issues still need to be addressed. Readiness for NG9-1-1 system implementation should be contingent upon demonstrated deployment of a statewide or regional (multiple counties or similar geographic boundary) ESInet. While state-wide ESInet deployment may be optimal, the reality is that deployment in some localities will likely be delayed. Therefore, there should not be a requirement for complete, state-wide ESInet deployment before NG9-1-1 requirements apply to portions of the state in which ESInet deployment has occurred.

In general, APCO agrees that the readiness of a *single* PSAP to implement an NG9-1-1 system should not trigger a carrier mandate absent some degree of regional or state readiness. However, PSAPs of significant size that serve large geographic areas or major cities with a considerable population (*e.g.*, New York City, Chicago, Houston) should be treated differently to ensure that major population centers are not held back by emerging or non-urban areas of deployment in the same state or region. Similar treatment should be provided for large consolidated PSAPs that service multiple cities or counties within a state. As the Commission moves forward, the parameters that define a particular PSAP size or boundary may need to be taken into account.

Furthermore, the readiness of an individual PSAP to accept text messaging should not be equated with readiness to implement an NG9-1-1 system as defined by relevant standards. In the event that the Commission mandates a SMS Direct-to-PSAP solution for texts, it will be necessary to consider operational and technical readiness at an individual PSAP level.

APCO noted in its initial comments that it agrees that states should be encouraged to eliminate regulatory barriers to NG9-1-1 that might exist. However, APCO also agrees with the comments of Texas 9-1-1 Alliance, suggesting that requiring states to certify that they have eliminated regulatory barriers could add further confusion to the issue of state jurisdiction regarding IP technologies such as NG9-1-1. The Commission's first task should be to provide clarity to that issue, before asking states to

certify that they have not done something that they may, or may not, even have jurisdiction to do in the first place.

APCO agrees that it is reasonable to allow a carrier six months to comply with a request for NG9-1-1 service. As stated by Verizon, at page 12 of its comments, a "minimum 6-month period is necessary for the service provider to negotiate any final arrangements to establish connectivity, and for all stakeholders to conduct the needed testing and consumer education." The Commission should also reference the readiness assessment information provided in the recently published CSRIC Working Group 1 Report.

Interim Solutions for Text-to-9-1-1

APCO's initial comments acknowledged the benefits of promoting early text-to-9-1-1 capability, especially for those with certain disabilities and in rare situations where voice communications is not possible. However, we cautioned that there are significant impediments to using SMS, the most-widely available texting technology, at the present time.

Several vendors proposed interim Direct-to-PSAP text solutions that they feel should be considered by the Commission for adoption at a national level. APCO does not endorse any specific technological approach to providing interim 9-1-1 text capability, but advises the Commission to consider the following as they review the vendor proposals and weigh the advantages of a national level interim implementation:

- What will be the expectation of, or impact to, other interim solutions that have already been deployed? Will the PSAP or 9-1-1 Authority be expected to discontinue use or current approaches?
- APCO concurs with Intrado and other parties that interim text solutions should involve dialing the digits 9-1-1, not an alternate short code. If a national level solution is determined to be the most viable path forward, carriers will need to support text to the digits "9-1-1."
- The solution *must* provide PSAP call routing capability that is as good as or better than what is being done today.
- The solution must provide accurate, automatic 9-1-1 location information that is as good as or better than what is being provided today. All carriers should be queried to determine whether or not their current location acquisition technologies will be able to support 9-1-1 location when SMS text is used to initiate a 9-1-1 call.

- The solution must provide a method by which the PSAP can easily re-contact (call back) a caller via text.
- Active 9-1-1 SMS calls from a mobile device or wherein the device roams to another carrier's network must be able to remain connected with the PSAP and call taker that is handling the call.
- Rebidding location should be supported for mobile text calls. The process for rebidding should not involve significantly increased complexity for the PSAP beyond what is done today.
- A national level interim text solution must provide the intelligence to sense an NG9-1-1 interface is present and provide non voice calls via SIP/RTT to the destination NG9-1-1 PSAP.
- Interim solutions that provide the capability to send/receive images or additional data as well as SMS should allow PSAPs to "Opt In" or "Opt out".[1] PSAPs must not be forced to receive imagery or additional data from an interim solution unless they formally agree to do so.[2] Interim solutions should possess the capability to advise callers whether or not imagery and external data can accompany their 9-1-1 text call.
- Before any additional data requirements are included, there must be standards for presenting and interpreting that additional data.[3] APCO, as an ASNI-certified standards development organization may be well-suited to address that issue.
- As mentioned by several respondents, Non-Service Initialized (NSI) phones should not be allowed to send text messages to 9-1-1.
- APCO is generally not supportive of proposals to implement regional call centers as suggested by AT&T as they require much more analysis and input from public safety before any further consideration is given to this model of operation.

The interim solutions proposed by Neustar and TCS involve the use of existing PSAP TTY/TDD

terminals or software modules to receive text messages. From a PSAP perspective, use of existing TTY

devices/software modules may provide a legitimate cost-saving incentive for accepting interim SMS text.

Use of existing TTY modules could also minimize training that would be required as opposed to the

---

[1] TCS, at page 5 of its comments, suggests that text-9-1-1 solutions should also have the ability to interface with a multimedia database that houses user-provided data. APCO does not currently support the TCS suggestion unless a PSAP can opt out of the multimedia database.

[2] Northrop Grumman notes in its comments that multimedia capability "means that large volumes of data arriving at the PSAPS in various formats must be processed quickly in order to extract the relevant critical and actionable pieces of information which will then be delivered to the telecommunicators and computer aided dispatch systems to effectively and efficiently respond to emergencies. The ability to fuse and correlate data from multiple sources of information including audio, video, text, and various databases to create a holistic operational view and a common operating picture will be critical in meeting the key objectives of the NG9-1-1 systems to better assess the nature of emergencies, identifying and locating the right resources to respond, and improving the overall response time."

[3] As Neustar notes in its comments, "every new kind of dataset means the 911 system has to have ways to present and interpret that data. This means all of the vendors have to come to agreement with each other on common standards for a particular type of data, and provide PSAPs with guidance, and possibly training, on how to present and interpret it. For example, the system can only tolerate one kind of passenger vehicle telematics data set; it cannot have 10 different vendors supplying different kinds of data, in different forms to 911. The Commission could work, possibly with other agencies such as Department of Transportation, to promote standards setting for these datasets."

PSAP being required to deploy new hardware or software applications. The following challenges need to be considered, however, and should be further explored before the FCC endorses any type of national-level proposal that involves the use of TTY:

- There are known Quality of Service (QoS) and technical concerns with Baudot that should not be ignored when considering a national solution for the general public.
- PSAPs that use standalone TTY devices (TTY is not incorporated into their call handling software modules) will face additional challenges if the volume of calls to these legacy devices increase dramatically. Standalone TTY hardware often requires additional time to use and therefore increases the length of time to process the call.
- Since all primary PSAPs are mandated to have TTY capability, does that mean that all primary PSAPs would be mandated to accept text calls from the general public if a gateway solution was deployed and available to their region? While an interim direct-to- PSAP text solution is an immediate need for individuals with certain disabilities, forcing an understaffed or unprepared PSAP to accept SMS text from the general public could prove disadvantageous. Consideration must be given to allowing PSAPs at least six months lead time to adopt an implementation plan.
- The technology provider should ensure that the PSAP will be able to easily distinguish converted SMS text calls from legacy TTY.
- Transmitting additional data such as images, personal medical history or vehicle crash data via existing TTY modules requires further technical research to assure that system processing and capacity issues are not encountered and that TTY is available for the hearing/speech impaired users who depend Baudot as their only means of contacting a 9-1-1 Center.[4]

PSAP Staffing Issues

APCO and others expressed concern with regard to how long it will take for PSAPs to handle text calls in general.[5] SMS and RTT solutions are not equivalent in their potential to impact PSAP call handling statistics. It is likely that SMS text calls will take longer to process than RTT. SMS will not allow call telecommunicators to view what the caller is typing and will therefore lessen the flexibility of the call taker to dynamically modify how they solicit information. APCO encourages the Commission to work with public safety stakeholders to identify potential methods of estimating impacts and staffing

---

[4] Use of TTY devices for text-to-9-1-1 is an example of an issue that is also addressed by the EAAC. APCO agrees with L.R. Kimball, at page 19 of its comments, that "it makes sense to combine the [EAAC and NG911] proceedings to explore the topic more holistically."

[5] Sprint notes at page 11 of its comments that "The Commission should consider requesting traffic engineering studies through industry or academic channels on how some aspects and parameters of text conversations in emergency situations would differ from existing voice communications and whether existing traffic engineering tools are currently adequate for designing PSAP capacity for text-based emergency conversations both for trunking levels and call taker staffing."

needs. There are a number of tools available such as the APCO RETAINS Toolkit that could be used to assist in determining staffing needs.

Alarm Issues

APCO concurs with the Alarm Industry Communications Committee (AICC) that "merely because a device is capable of communicating with public safety directly, does not mean that it should be so enabled." False alarm verification of automated signals or alarms is a critical consideration for NG9-1-1 deployments. State, regional and local laws may also govern what can be sent directly to PSAPs.

9-1-1 Call Prioritization Issues

APCO concurs with the many respondents who point out that 9-1-1 call prioritization will become more complex as IP-based communications technologies become more widespread. Bottlenecks and congestion points could occur in multiple places. It is important to realize, however, that NG9-1-1 policy-based routing as described in the NENA i3 architecture will provide an opportunity to alleviate much of the congestion that occurs at the PSAP level. Policy-based call routing will allow PSAPs to automatically divert incoming calls to alternate PSAPs when their incoming call queue exceeds a predefined threshold. The Commission should allow the current CSRIC Work Group 10 to continue its work and report on its findings before drawing conclusions on this issue.

CONCLUSION

The Commission should proceed to address the critical, but complex, issues of

text-to-9-1-1 and other NG9-1-1 matters addressed in the *NPRM*, consistent with these reply

comments and APCO's initial comments

Respectfully submitted,

Gregg Riddle, President
APCO International

Government Relations Office
1426 Prince Street
Alexandria, VA 22314
(571) 312-4400

Robert M. Gurss
Regulatory Counsel
(202) 236-1743

February 9, 2012